

Marshall Center Book Lists Patents Available for Licensing

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Need information on welding innovations?
Advances in bearing technology? How
about medical advances or new uses for
materials?

"NASA's ImagiNation," a new book
produced by the Technology Transfer Office
at the Marshall Center may provide just
what you need.

Now, necessity may be the mother of
invention, but the patent process is its legal
guardian. The 76-page book lists and
describes 38 of the best inventions patented
by scientists and engineers of the Marshall
Center. The 38 inventions were selected as
they seem to offer the most potential for
commercial application—a technology
"spinoff," in NASA-ese—and because they
are representative of the kinds of technol-
ogy assistance available from the northern
Alabama space center.

The technologies range from the exotic to
the "why didn't I think of that!?"

Perhaps the longest title is "Control
Circuitry Using Electronic Emulation of a
Synchro Signal for Accurate Control of
Position and Rotation for Shafts." The
patent, in short, describes a digital circuit
that improves the operation of robotic arms.
Some of the shorter titles include a new
design for a "Slip Joint Connector" and a
"Prosthetic Elbow Joint." A "Quick Connect
Nut and Bolt" device offers speed and
security in building a space station—or in
making emergency repairs here on Earth.

As NASA's leading center for the develop-
ment of spacecraft propulsion systems,
many of the patents included in the
publication stem from work performed in

developing the Saturn series of launch
vehicles for the moon landing, the present
Space Shuttle, and the next generation of
propulsion systems for American space
launch systems. Many of these patents deal
with innovations in welding technology or
equipment, development and testing of
roller bearing assemblies and hydrostatic
bearings used in rocket engine turbopumps,
and the use of x-ray technology in nonde-
structive testing. The welding technology,
for example, already has seen spinoffs into
recycling 55-gal oil drums and in improving
the manufacture of deep fat fryers and air-
conditioning compressors.

A Centerwide interest in biomedical
technologies has resulted in prostheses for
amputees and an x-ray system for imaging
soft tissues.

Research into uses for composite materials
is extensive at Marshall and patents have
been issued for breakthroughs in devising
new methods of making composite
structures. Metallurgy is another area of
interest at Marshall, particularly as regards
alloys and superalloys which are tolerant to
rapid temperature changes.

The new publication provides but a brief
overview of some of the thousands of
patented developments stemming from the
nation's space program which are now
available for licensing to American business
and industry. For more information on
NASA-patented technologies or to obtain a
copy of the publication, call 1-800-USA-
NASA.

Sponsor: Office of Commercial Develop-
ment and Technology Transfer

Biographical Sketch: Bob Lessels is the
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